

said portable radio information terminal apparatus [being capable of] executing a plurality of operations including screen displaying on each of [the] said plurality of layers[, said portable radio information terminal apparatus having an] and including inputting means [capable of] for executing a command inputting operation and an image display device for screen displaying, comprising the steps of:

A₁ [wherein screen operation processing with a moving operation from one of the layers to another combined with a screen displaying operation for said another layer is repetitively executable only] executing repetitively, during a period of time in which a predetermined command input operation is [being] executed, screen operation processing including a moving operation for moving from one of said plurality of layers to another of said plurality of layers and a screen displaying operation for displaying said another of said plurality of layers on said image display device.

A₂ --3. (Amended) The screen operating method according to claim 1, wherein said [stop] top layer is a standby screen displaying layer.

A₃ --5. (Amended) A portable radio information terminal apparatus for executing information control of a multilayer structure having a plurality of layers including a top layer and at least one lower layer on which a plurality of messages terminated at said portable radio information terminal

apparatus are placed, said top layer thereof being one of a main menu screen displaying layer and a standby screen displaying layer, [said portable radio information terminal apparatus being capable of] for executing a plurality of operations including screen displaying on each of [the] said plurality of layers[, said portable radio information terminal apparatus having an] and including inputting means [capable of] for executing a command inputting operation and an image display device for screen displaying, said portable radio information terminal apparatus comprising [at least]:

a₃ [a] command inputting discriminating means for determining whether an input signal supplied from said inputting means is generated by a predetermined command inputting operation;

[a] movement control means for determining, based on a decision [made] by said command inputting discriminating means, whether [the generated] said input signal [continues and, if said generated input signal is found continuing, activating a layer-to-layer moving means and, if said generated input signal is found stopped, stopping said layer-to-layer moving means] is continuous; and

[said] layer-to-layer moving means for causing a layer-to-layer moving operation based on a command issued by said movement control means and for executing a screen displaying operation on a destination layer[;], wherein

when said movement control means determines that said input signal is continuous, said layer-to-layer moving

A3 means is activated and when said movement control means determines that said input signal is stopped, said layer-to-layer means is stopped, and

while said [generated] input signal [continues] is continuous, said layer-to-layer moving operation and said screen [display] displaying operation on said destination layer are repeated.

--7. (Amended) A recording medium [that records, as] for recording a plurality of programs readable and executable by a computer, [at least] comprising:

A4 [a] command input discriminating means for determining whether an input signal generated while a portable radio information terminal apparatus having an image display device and an inputting device and executing information control on a multilayer structure [of which] including a top [player] layer of a plurality of layers that is one of a main menu displaying layer and a standby screen displaying layer is operating on one [layer] of said plurality of layers of said multilayer structure has been generated by a predetermined command inputting operation;

[a] movement control means for determining, based on a decision [made] by said command input discriminating means, whether [the generated] said input signal [continues and, if said generated input signal is found continuing, activating a layer-to-layer moving means and, if said generated input signal is found stopped, stopping said layer-to-layer moving

means] is continuous; and

[said] layer-to-layer moving means for causing a layer-to-layer moving operation based on a command issued by said movement control means and for executing a screen displaying operation on a destination layer, wherein

when said movement control means determines that said input signal is continuous, said layer-to-layer moving means is activated and when said movement control means determines that said input signal is stopped, said layer-to-layer means is stopped.

94 --8. (Amended) A microcomputer apparatus, comprising:

a central processing unit;

[a] recording means for recording a procedure readable and executable by said central processing unit as a program[:]; and

[a] communication means connected at least to said central processing unit and said recording means, [having a] including data transmitting means connectable from [the] an outside of said microcomputer apparatus[,] and for providing a capability of transmitting a signal [resulted] generated from a processing operation of said central processing unit [to] with an external device through one of a cable and a radio wave[:];

wherein said recording means records said procedure including at least

[a] command input discriminating means for determining whether an input signal generated while a portable radio information terminal apparatus having an image display device and an inputting device and executing information control on a multilayer structure [of which] including a top [player] layer of a plurality of layers that is one of a main menu displaying layer and a standby screen displaying layer is operating on one [layer] of said plurality of layers of said multilayer structure has been generated by a predetermined command inputting operation[;].

94 [a] movement control means for determining, based on a decision [made] by said command input discriminating means, whether [the generated] said input signal [continues and, if said generated input signal is found continuing, activating a layer-to-layer moving means and, if said generated input signal is found stopped, stopping said layer-to-layer moving means;] is continuous, and

[said] layer-to-layer moving means for causing a layer-to-layer moving operation based on a command issued by said movement control means and for executing a screen displaying operation on a destination layer, wherein
when said movement control means determines that said input signal is continuous, said layer-to-layer moving means is activated and when said movement control means determines that said input signal is stopped, said layer-to-layer means is stopped.

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--9. (Amended) A screen operating method for a portable radio information terminal apparatus for executing information control of a multilayer structure having a plurality of layers including a top layer and at least one lower layer on which a plurality of messages terminated at said portable radio information terminal apparatus are placed, said top layer thereof being one of a main menu screen displaying layer and a standby screen displaying layer, said portable radio information terminal apparatus [being capable of] executing operations including screen displaying on each of [the] said plurality of layers[, said portable radio information terminal apparatus having an] and including inputting means [capable of] for executing a command inputting operation and an image display device for screen displaying, comprising the step of:

[wherein, if a continuation time of said command inputting operation is in excess of a predetermined time,] moving said screen displaying [moves] to said top layer of said multilayer structure if a continuation time of said command inputting operation is in excess of a predetermined time.

--10. (Amended) A portable radio information terminal apparatus for executing information control of a multilayer structure having a top layer and at least one lower layer on which a plurality of messages terminated at said portable radio information terminal apparatus are placed, said

top layer thereof being one of a main menu screen displaying layer and a standby screen displaying layer, [said portable radio information terminal apparatus being capable of] for executing operations including screen displaying on each of [the] said plurality of layers[, said portable radio information terminal apparatus having an] and including inputting means [capable of] for executing a command inputting operation and an image display device for screen displaying, said portable radio information terminal apparatus comprising [at least]:

94 [a] command input processing means for determining whether an input signal supplied from said [input] inputting means [has been] is generated by a predetermined command inputting operation;

[a] movement control means for counting, based on a decision [made] by said command input processing means, a continuation time of [the generated] said input signal [and, if the continuation time is found exceeding a predetermined time, instructing an upper-layer moving means to move screen displaying to said top layer and, if the continuation time is found within the predetermined time, instructing said upper-layer moving means to move screen displaying to an adjacent upper layer]; and

[said] upper-layer moving means for executing, based on a command issued by said movement control means, movement to at least one of said top layer and [said] an adjacent upper layer, wherein

if said continuation time exceeds a predetermined time, said movement control means instructs said upper-layer moving means to move said screen displaying to said top layer and, if said continuation time is within said predetermined time, said movement control means instructs said upper-layer moving means to move said screen displaying to said adjacent layer.

94 --11. (Amended) A recording medium [that records, as] for recording a plurality of programs readable and executable by a computer, [at least] comprising:

[a] command input processing means for determining whether an input signal generated while a portable radio information terminal apparatus having an image display device and an inputting device and executing information control on a multilayer structure [of which] including a top [player] layer of a plurality of layers that is one of a main menu displaying layer and a standby screen displaying layer is operating on one [layer] of said plurality of layers of said multilayer structure has been generated by a predetermined command inputting operation;

[a] movement control means for counting, based on a decision [made] by said command input processing means, a continuation time of [the generated] said input signal [and, if the continuation time is found exceeding a predetermined time, instructing an upper-layer moving means to move screen displaying to said top layer and, if the continuation time is

found within the predetermined time, instructing said upper-layer moving means to move screen displaying to an adjacent upper layer]; and

[said] upper-layer moving means for executing, based on a command issued by said movement control means, movement to at least one of said top layer and [said] an adjacent upper layer, wherein

if said continuation time exceeds a predetermined time, said movement control means instructs said upper-layer moving means to move said screen displaying to said top layer and, if said continuation time is within said predetermined time, said movement control means instructs said upper-layer moving means to move said screen displaying to said adjacent layer.

--12. (Amended) A microcomputer apparatus, comprising:

a central processing unit;

[a] recording means for recording a procedure readable and executable by said central processing unit as a program[:]; and

[a] communication means connected at least to said central processing unit and said recording means, [having a] including data transmitting means connectable from [the] an outside of said microcomputer apparatus, and for providing a capability of transmitting a signal [resulted] generated from a processing operation of said central processing unit [to]

with an external device through one of a cable and a radio wave[;]┘

wherein said recording means records said procedure including at least[:

94 a] command input processing means for determining whether an input signal generated while a portable radio information terminal apparatus having an image display device and an inputting device and executing information control on a multilayer structure [of which] including a top [player] layer of a plurality of layers that is one of a main menu displaying layer and a standby screen displaying layer is operating on one [layer] of said plurality of layers of said multilayer structure has been generated by a predetermined command inputting operation[;]┘

[a] movement control means for counting, based on a decision [made] by said command input processing means, a continuation time of [the generated] said input signal [and, if the continuation time is found exceeding a predetermined time, instructing an upper-layer moving means to move screen displaying to said top layer and, if the continuation time is found within th predetermined time, instructing said upper-layer moving means to move screen displaying to an adjacent upper layer;]┘ and

[said] upper-layer moving means for executing, based on a command issued by said movement control means, movement to at least one of said top layer and [said] an adjacent upper layer, wherein

94 if said continuation time exceeds a predetermined time, said movement control means instructs said upper-layer moving means to move said screen displaying to said top layer and, if said continuation time is within said predetermined time, said movement control means instructs said upper-layer moving means to move said screen displaying to said adjacent layer.

95 --13. (New) The screen operating method according to claim 1, further comprising the step of:

receiving said plurality of messages transmitted to said portable radio information terminal via a radio wave signal.

--14. (New) A portable radio information terminal apparatus according to claim 5, further comprising:

means for receiving said plurality of messages transmitted via a radio wave signal.--

REMARKS

Claims 1, 3, 5, and 7-12 have been amended hereby and claims 4 and 6 have been canceled, without prejudice or disclaimer. New claims 13 and 14 have been added.

As will be noted from the Declaration, Applicant is a citizen and resident of Japan and this application originated there.

Accordingly, the amendments made to the